

The CCW MkII is a lightweight, FIA certified, 280mm carbon steering wheel designed specifically for professional motorsport applications.

The CCW MkII incorporates a high resolution, sunlight viewable 900nit, 480x272 QVGA, 16.7M colour 4.3" TFT display. Together with 16 fully configurable RGB LEDs, all controlled via Ethernet from the latest range of Cosworth data loggers and ECUs.

Available in two variants; Souriau (8STA) or Deutsch Autosport (AS) designed to support either Cosworth or SPA quick release mechanisms respectively.

The CCW MkII has ten push button switches, each of which can be defined as either a momentary or latching type. The buttons are manufactured to the highest standards, designed to withstand over 100K cycles and are fitted with rubber guards to prevent accidental operation. The integrated grips and rubber switch mats are manufactured using high quality 60A Shore Silicone rubber.

The CCW MkII has four 12 position rotary switches and two 12 position thumbwheels. All rotary switches are fitted with a mechanical stop between positions 12 and 1.

The CCW MkII has inputs for two digital paddles and two analogue paddles as well as two digital/analogue inputs,



there are also two separate excitations that can be software configured to be +5 or +12V.

All buttons and rotaries are fully configurable and can be transmitted via CAN for use with other systems on the vehicle. Two opto-isolated outputs are available to drive third party systems such as a push-to-talk driver's radio. The raw voltages from rotary switches 1 and 2, the clutch paddles and gearshift paddles are all hardwired to the column connector enabling them to be connected directly to other components and vehicle systems.

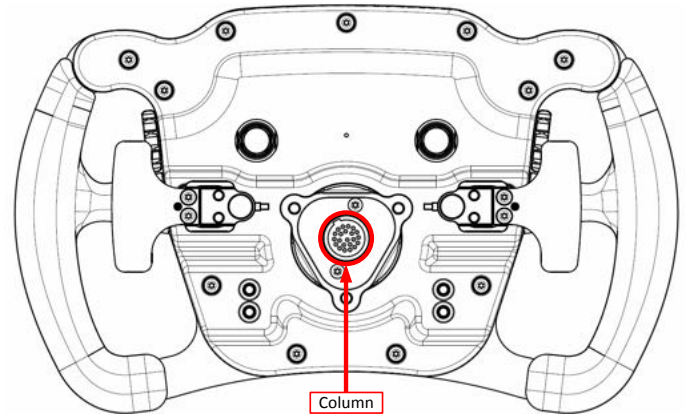
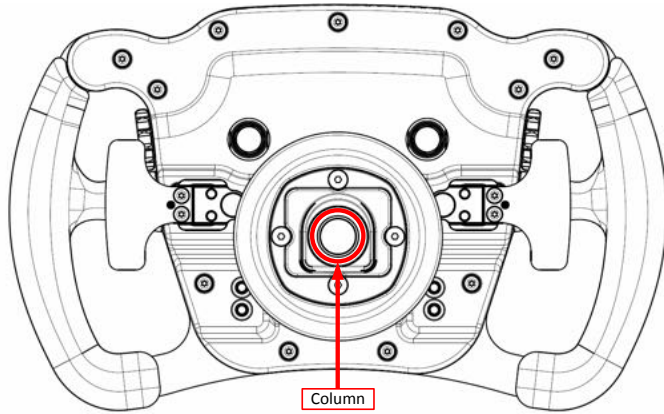
Specifications

Mechanical Data	
Material	Carbon Fibre
Diameter	280mm
Weight	2300g (excluding QR & paddles)
Column Connector	Souriau or Deutsch Autosport
Quick Release Type	Cosworth or SPA
Temperature Rating	Operating -20 to +70°C Storage -30 to +80°C
IP Rating	IP65

Display Technical Data	
Screen	a-Si TFT LCD 4.3"
Resolution	480 x 272 QVGA
Viewable Area	94.04 x 53.85mm
Contrast Ratio	500
Brightness	900 nit
Display Colours	16.7M
Viewing Angle	Vertical -70° to +40° Horizontal ± 50°

Electrical Data	
Supply Voltage	6-33V
Supply Current	250mA
Push Buttons	10
Button Type	Software Selectable
External Digital Inputs	2
External Analogue Inputs	2
External Digital/Analogue Inputs	2
Rotary Switches	4 x 12 Position
Thumbwheels	2 x 12 Position
Column I/O	2 x Opto-Isolated 2 x Ext Digital 2 x Ext Analogue 2 x Hardwired Rotary
Ethernet	1 x 100MB Ethernet
CAN Communication	1 x CAN 2.0B
CAN Rate	125/250/500/1000 kbps
CAN Termination	Software Selectable

Column Connector Information



Souriau Variant

Connector	Mating connector
SOURIAU 8STA612-35PN518	SOURIAU 8STA012-35SN518

Autosport Variant

Connector	Mating connector
Autosport AS012-35PN	Autosport AS612-35SN

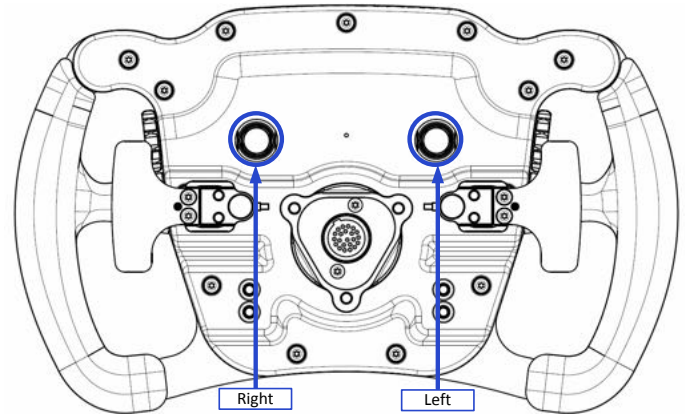
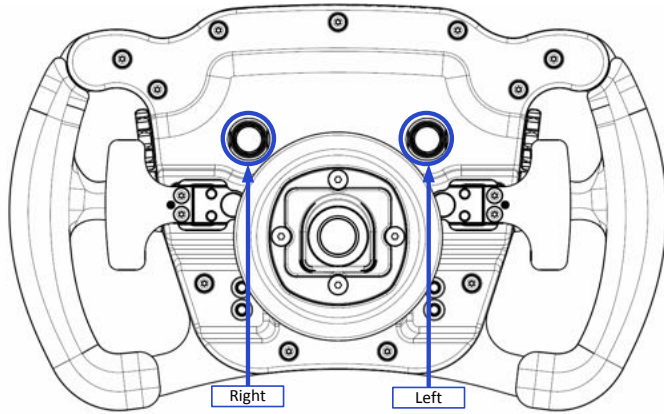
Column Connector Pinout

Pin	Signal	Description
1	+12V	+12V
2	Gnd	Gnd
3	CRSig	Clutch Right Signal
4	CGnd	Clutch Gnd
5	CLSig	Clutch Left Signal
6	SLSig	Shift Left Signal
7	SRSig	Shift Right Signal
8	OS1In	Opto-isolated Switch 1 Input
9	OS1Out	Opto-isolated Switch 1 Output
10	RHW1Sig	Rotary Hard Wired 1 Signal
11	RHWGnd	Rotary Hard Wired Gnd
12	RHW2Sig	Rotary Hard Wired 2 Signal
13	OS2In	Opto-isolated Switch 2 Input
14	OS2Out	Opto-isolated Switch 2 Output
15	RS232 Rx	RS232 Rx Debug
16	RS232 Tx	RS232 Tx Debug
17	Enet Rx+	Ethernet Rx+
18	Enet Tx+	Ethernet Tx+
19	Enet Rx-	Ethernet Rx-
20	CAN -	CAN Low
21	CAN +	CAN High
22	Enet Tx-	Ethernet Tx-

Column Connector Pinout

Pin	Signal	Description
1	+12V	+12V
2	Gnd	Gnd
3	CRSig	Clutch Right Signal
4	CGnd	Clutch Gnd
5	CLSig	Clutch Left Signal
6	SLSig	Shift Left Signal
7	SRSig	Shift Right Signal
8	OS1In	Opto-isolated Switch 1 Input
9	OS1Out	Opto-isolated Switch 1 Output
10	RHW1Sig	Rotary Hard Wired 1 Signal
11	RHWGnd	Rotary Hard Wired Gnd
12	RHW2Sig	Rotary Hard Wired 2 Signal
13	OS2In	Opto-isolated Switch 2 Input
14	OS2Out	Opto-isolated Switch 2 Output
15	RS232 Rx	RS232 Rx Debug
16	RS232 Tx	RS232 Tx Debug
17	Enet Rx+	Ethernet Rx+
18	Enet Tx+	Ethernet Tx+
19	Enet Rx-	Ethernet Rx-
20	CAN -	CAN Low
21	CAN +	CAN High
22	Enet Tx-	Ethernet Tx-

Paddle Connector Information



Connector	Mating connector
LEMO HEM.1M.307.XLNP	LEMO FMN.1M.307.XLCT

Left Paddle Pinout

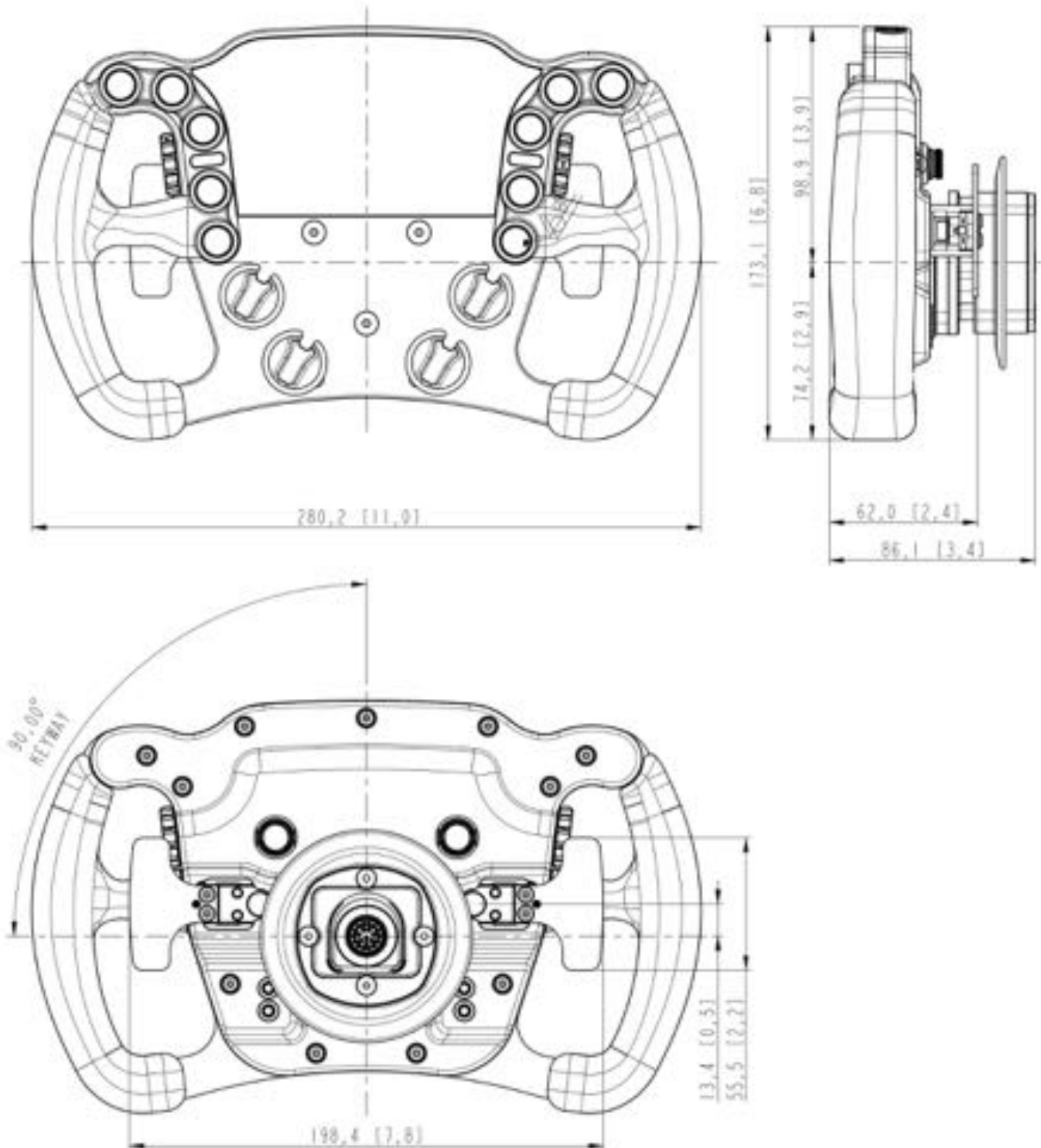
Pin	Signal	Description
1	SLGnd	Shift Left Gnd
2	SLSig	Shift Left Signal
3	SExc	Shift Excitation (5/12V)
4	CLGnd	Clutch Left Gnd
5	CLSig	Clutch Left Signal
6	CExc	Clutch Excitation (5/12V)
7	ADLSig	Analogue / Digital Left Signal

Right Paddle Pinout

Pin	Signal	Description
1	SRGnd	Shift Right Gnd
2	SRSig	Shift Right Signal
3	SExc	Shift Excitation (5/12V)
4	CRGnd	Clutch Right Gnd
5	CRSig	Clutch Right Signal
6	CExc	Clutch Excitation (5/12V)
7	ADRSig	Analogue / Digital Right Signal

Dimensions

Souriau Variant

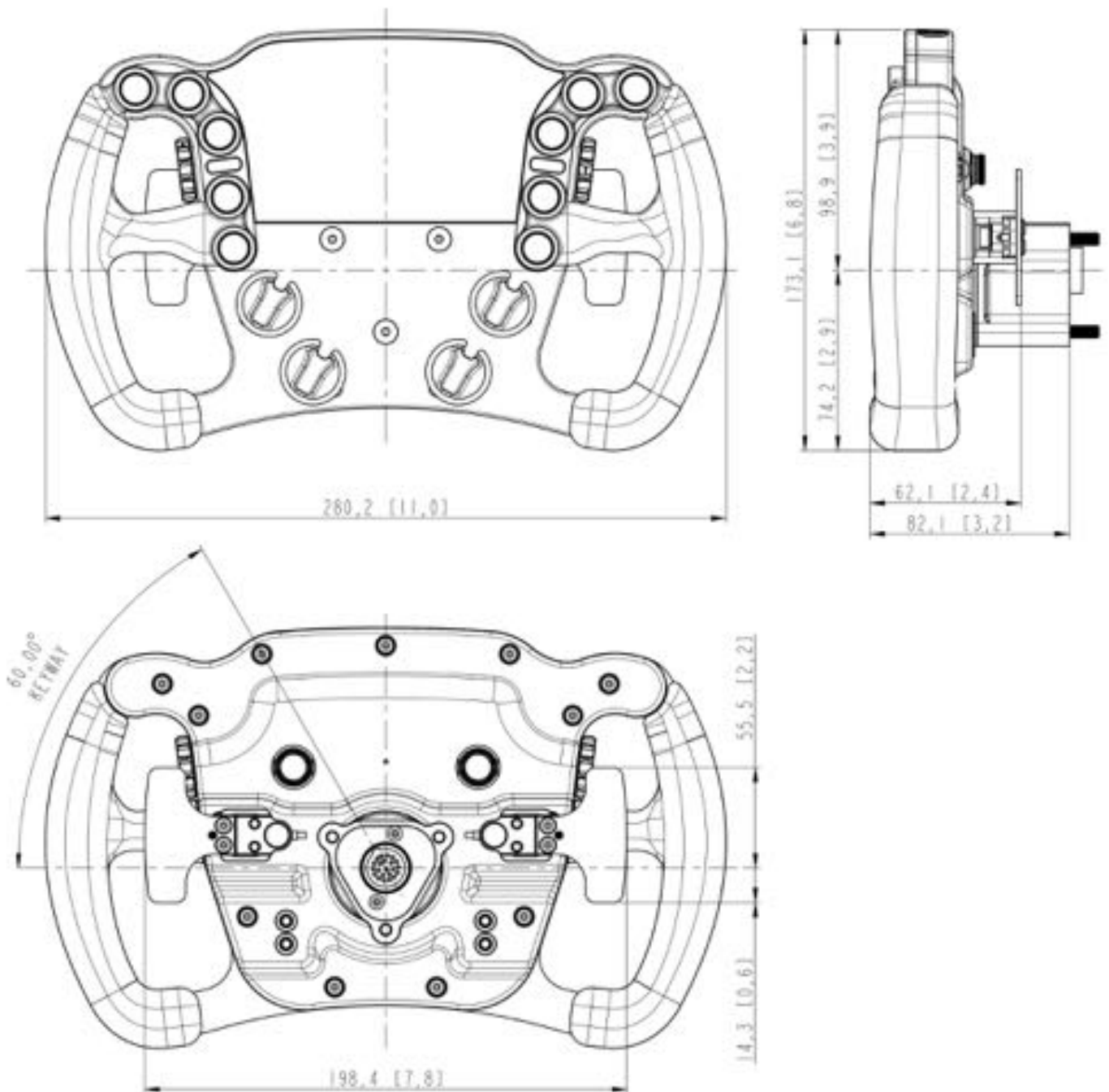


All dimensions shown in mm [inches in brackets]

Note: do not cover vent hole on rear of wheel, this allows the internal pressure of the wheel to equalise whilst maintaining a seal via a breathable membrane.

Dimensions

Autosport Variant



All dimensions shown in mm [inches in brackets]

Note: do not cover vent hole on rear of wheel, this allows the internal pressure of the wheel to equalise whilst maintaining a seal via a breathable membrane.

Ordering Information

Wheel Only

Part Number	
01D-641150-8STA	CCW <i>MkII</i> (Souriau variant) fitted with: Souriau 22pin connector compatible with Cosworth 8STA quick release bolt on kit (13D-641179-Bolt)
01D-641150-AS	CCW <i>MkII</i> (Autosport variant) fitted with: Autosport 22pin column connector and spacer compatible with SPA quick release system

Accessories

Part Number	
13D-641179-Bolt	Cosworth 8STA quick release bolt on kit, contains: 1x 8STA012-35SN518 22pin connector 1x Quick release female coupling (wheel side) 1x Quick release male bolt on boss (column side) 1 x Connector locking grub screw
01D-641180-Lemo	CCW <i>MkII</i> Digital Paddle (x1) Fitted with Lemo connector

